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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,373	08/17/2001	Craig Andrew Weldon	051481-5065	1599
9629	7590	01/12/2004	EXAMINER HEPPERLE, STEPHEN M	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			ART UNIT 3753	PAPER NUMBER 12

DATE MAILED: 01/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

09/12

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/931,373	WELDON ET AL.	
	Examiner	Art Unit	
	Stephen M. Hepperle	3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2,3,5-13,15 and 17-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,3 and 25 is/are allowed.
- 6) ☒ Claim(s) 5-13,15,17-22 and 26 is/are rejected.
- 7) ☒ Claim(s) 23,24 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All   b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 5-13, 15, and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Satoh et al. Satoh shows two valves in a single housing. The upper valve includes a first subchamber 62 (connected to the fuel tank) that has a horizontal component (formed in part by a first section (floor) of the valve housing) and a vertical tube ending in an aperture sealed by diaphragm 74. When the valve is closed, the first chamber is separated from the second chamber which leads by passageway 70 to a fuel vapor canister 34. The third subchamber is a spring chamber 76 that is vented through orifice 80 to the outside. This orifice is seen as a restrictor because it has a much smaller cross section area than the chamber vented. The diaphragm includes a central portion backed by a flat plate. Regarding claim 11, it would be expected that a diaphragm would be made of material impermeable to the fluids in its intended environment. With respect to claims 17 and 22, either valve (upper or lower) meets the claim, and with respect to claims 18 and 23-24, the lower valve meets the claim. The method claims are seen as performed by Satoh. As stated earlier, the orifice 80 is seen as inherently providing restriction and therefore damping. With respect to claim 12, the backing plate 88 or 108 provides the central portion of the diaphragm with added rigidity and thickness. Note that the use of "adapted to be connected" to a vapor canister or fuel tank is seen as suggested use only. Thus in claims 17 and 19, Satoh port 24 or 44 is seen as the recited first port, and port 36 or 70 is seen as the second

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port. In claims 3, 22, and 26, the language is seen as limiting because the canister and tank are positively recited as part of a combination.

Claims 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamazaki et al. Yamazaki shows an isolation valve where a diaphragm divides the valve into 3 subchambers when closed, such as by the presence of subatmospheric pressure from second port 12 (from the vapor canister) acting on the central portion of the diaphragm 8.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Satoh et al. It is notoriously well known to provide some sort of filter between the outside and any chamber where cleanliness is important, particularly in an automotive environment. It would have been obvious to provide the Satoh orifice with a filter to keep dirt out of the valve.

Claim 26 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yamazaki et al. The relatively long thin pipe 6 leading top the filler neck is seen as means damping the movement of the diaphragm, as well as the internal frictional resistance of spring 10 and the diaphragm. Alternatively, it would have been obvious to provide a restrictor on line 6 to reduce valve chatter or oscillation and thus extend valve life.

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Claims 23-24 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Yamazaki has no equalizing check valve.

Claims 2-3 and 25 are allowed over the prior art of record. With respect to claims 2-3, the positive recitation of the canister and fuel tank causes the ports in Satoh to be reversed from that recited in the claims. Applicant's first port connects the valved aperture to the canister. Satoh's second port is thus connected.

Applicant's arguments filed 3 December 2013 have been fully considered but they are not persuasive with respect to the claims still rejected over Satoh. As stated above, only when the combination of the valve, canister, and fuel tank is clearly recited have the connections of the valve been given patentable weight.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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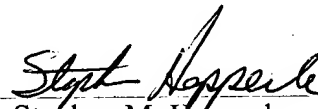
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Hepperle whose telephone number is 703-308-1051.

The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on 703-308-1272. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7765.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0861.

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Stephen M. Hepperle  
Primary Examiner  
Art Unit 3753

SMH